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RUEHNH/AMCONSUL NAHA 5598
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RUEHFK/AMCONSUL FUKUOKA 3183
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SIPDIS

DEPT FOR STAS, OES, AND EAP/J
PASS TO WHITE HOUSE OSTP
PASS TO NSF FOR DR. FREEMAN/CLANDWEHR/AEMIG
PASS TO DOE JGLASER
PASS TO DOD WMCCLUSKEY
PASS TO CDC JNICHOLSON
PASS TO FBI GBISHEA/SLENZENWEGER/DHICKEY/MMILLER/
DHS FOR OFFICE OF S&T U/S

SIPDIS

E.O. 12958: N/A
TAGS: TNGD PTER JA
SUBJECT: SAFE AND SECURE SOCIETY: MEXT FUNDS PROJECTS FOR JFY2007

¶1. Summary -- The Office of Science and Technology for a Safe and Secure Society in Japan's Ministry of Education, Culture, Sports, Science and Technology (MEXT) has selected five science and technology related "Safe and Secure Society" projects to receive Yen 405 million (USD 3.5 million) in JFY 2007. From 69 proposals submitted by Japanese research institutes, MEXT selected three R&D projects and two technology feasibility studies in the areas of: 1) real-time detection of chemical and biological agents; 2) detection of illegal drugs and explosive or hazardous materials in the transportation/logistical system, and public buildings; and 3) hazardous materials dispersion modeling and damage mitigation. The MEXT will allocate approximately Yen 100 million (USD 0.9 million) to each R&D project and Yen 50 million (USD 0.4 million) to each feasibility study. End Summary.

Real-time detection of chemical and biological agents

¶2. Feasibility Study I: Bio-sensors for both Chemical and Biological Agents. A team of researchers from Osaka University, Meidensha Corporation, Daikin Industries Ltd., Okayama University of Science, Bio Device Technology Co., and National Institute of Advanced Industrial Science and Technology (AIST) will conduct a one year study to develop bio-sensors capable of simultaneously detecting chemical and biological agents. Dr. Eiichi Tamiya, a professor in the Division of Precision S&T and Applied Physics at Osaka University's Graduate School of Engineering, will lead the team in creating a bio-chip that can detect chemical and biological agents using a micro-electromechanical system (MEMS) and a prototype device equipped with the bio-chip that can be deployed in a variety of locations. The team will also simulate a network monitoring and detection system in transportation networks and other public facilities.

¶3. Feasibility Study II: Stationary Detection Device for Biological Agents in Public Areas. Dr. Toru Okumura, Professor, School of Medicine, Saga University will lead a research team on a one-year study to investigate practical applications for a stationary device that can detect biological agents in crowded public areas such as mass transit and shopping centers. Researchers from Saga Ceramics Research Lab., Chuo Electric Works Ltd., and

Adtec Plasma Co., Ltd will participate in the study. The team aims to develop fundamental technologies for auto-analysis of biological agents. Such technologies could collect microorganisms through porous ceramics, detect biological agents through fluorescence staining, and then reproduce porous ceramics using plasma treatment to collect microorganisms for continual analysis. Note: Saga Prefecture is a traditional center for Japanese high-quality ceramic products. End note.

Illegal drug and explosive/hazardous materials detection

¶4. Project I: Walk-through Explosives Detection System. Dr. Yasuaki Takada will lead a team from Hitachi's Central Research Laboratory that will aim to develop a system within three years to detect molecules released as odor from explosives in as little as one second. The system is expected to be installed in crowded areas, such as train stations, escalators and entrances to sports or music events to detect explosives residue on clothing or baggage. Hitachi hopes to commercialize the technology in JFY 2012.

¶5. Project II: Passive Extremely High Frequency (EHF) Imaging Device. Dr. Hiroyasu Sato, Associate Professor, Group of Electrical and Communication Engineering, School of Engineering, Tohoku University, will lead a team from Tohoku University, Maspro Denkoh Corp., and Chuo Denki Kogyo Co. Ltd to develop a portable, passive EHF imaging device to detect hazardous materials hidden in clothes. All materials emit EHF waves and the EHF wave is able to naturally penetrate clothes and walls. By using these factors, the team will develop a device that can detect hazardous materials such as guns, plastic bottles containing hazardous liquids, and plastic explosives at airport or port facilities. The goal is to develop the device within three years.

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Hazardous material dispersion modeling and mitigation

¶6. Project III: Hazardous Materials Dispersion Modeling. Dr. Shinsuke Kato, Professor, Institute of Industrial Science, University of Tokyo, will lead a three year project to develop an accurate system to forecast the spread of hazardous materials and develop an evacuation guidance system for use during a hazmat emergency. Mitsubishi Heavy Industries (MHI), Advance Soft Corporation and AIST will also collaborate in the project. The team's forecasting system, based on physical data from spreading material, is expected to be more accurate than current conventional systems based on statistics and prior experience. After testing the accuracy of their system using experiments and models, the research team will verify the effectiveness of their systems at local government NBC emergency drills.

¶7. For further information, please contact Mikako Sano at sanomx@state.gov or Bart Cobbs at cobbsbd@state.gov.

SCHIEFFER